



Training Principles and Methods

BASIC TRAINING PHILOSOPHY:

Training is a process of stimulus and adaptation. It requires finding the optimal balance of training stimuli (e.g., long runs, tempo runs, speed, hills) and recovery. With the correct type, duration and intensity of training, followed by sufficient recovery, your body continues to adapt to a higher level.

Our half marathon and 5K training programs are designed to allow your body to adapt and become stronger, more efficient runners. The training plan concept applies an overload and rest approach with the overload from frequency, intensity, and duration of the runs.

Running a 5K and Half Marathon are aerobically intensive. The objective through training is to teach the body to efficiently use energy. As you build your running fitness, your body will undergo various adaptations with the heart, circulation, muscles, connective tissue, lungs and metabolic (lactate threshold).

You will need to consider your running fitness to determine the intensity level appropriate for you. For all runners, it is important to complete the training distances each week, however, the type of training and the intensity will vary depending upon whether you are at a novice, intermediate, or advanced level of running. A new runner will not train the same as someone who has done several half marathons. Also, everyone will progress at different rates, so don't compare yourself to others. Throughout the training process, it's important to listen to your body.

Use the 5K and Half Marathon pace charts provided as a guide for determining the approximate pace for your easy runs, long runs, recovery runs, speed work, and race pace runs. These are all based on your goal race overall time. Be sure that your goal is reasonable for your current level of running ability.

TRAINING PHASES:

Base Building: SO IMPORTANT to reducing the potential for injury

- This is the focus for the 5K beginner program.
- For the half marathon program, this will also apply to anyone who has not been running at least 3-4 miles, 3-4 times per week for at least a couple of months. The first 6 weeks or so of this training program should focus on base building.
 - For some, the entire 12 weeks can be used as base building (FINISH Program)
- Emphasis is on building mileage
- Pacing done at a conversational pace
- Incorporate hill training to build strength

Sharpening:

- Incorporate after building a solid base (FAST Program)
- Incorporate some race pace running (Tues group run)
 - Maximizes neuromuscular coordination at race pace
 - Maximizes running efficiency to minimize energy usage

- Slowly incorporate race pace during longer runs
- Incorporate short intervals – speed training, fartleks, tempo runs
 - Improve aerobic capacity and increase lactate threshold

Tip: Do the minimum required to achieve the results

- Reduces the potential for injury and burn-out
- A little bit of speed training goes a long way. Too much speed training, or speed training before the appropriate base buildup can lead to injury.
- Just increasing mileage will help improve pace, especially for newer runners

REST:

- Rest is just as important as a run workout.
- Your body needs time to repair and rebuild, and this occurs during rest.
- Skipping rest days will tax your body's ability to recover and make you more prone to injury.
- Be sure to take your scheduled rest days, but also listen to your body. Each week there is a minimum of 1 full day, but no more than 3 days of rest (no running or cross training).

COMMON WORKOUTS:

Run/Walk Intervals:

- Great for those who are new to running or have taken time off from running
- Time is spent alternating walking with running intervals
- Over time, progress from walking more/running less to equal amounts of running and walking to eventually more running and less walking.

Easy Run:

- Low-intensity effort of a short to moderate duration. Run at a comfortable pace - an easy conversational pace. Typically, 30 to 90 seconds slower than your goal race pace.
- Purpose - provide fundamental adaptations. You use slow-twitch muscle fibers and you're building your capability to improve blood flow to your muscles, so they're better able to utilize oxygen. Without that, you can't do the intense runs.
- For the half marathon program, it is important that you maintain at least two easy runs per week.
- Consider these base maintenance runs. The base fitness established through easy runs enables the runner to safely progress to other types of training.
- All runners benefit from the cardiovascular and muscular-structural development easy running promotes.
- Easy runs allow for recovery from the hard days. It's during recovery that adaptations from the hard training take place. If a runner doesn't recover, the body is not going to adapt, and you'll either continue digging a hole for yourself or get injured.

Long Run:

- We refer to this as a Long Slow Distance. Long runs should start easy and be run about 30 to 90 seconds slower than race pace. Run at a conversational pace, able to string full sentences together. This will allow your body to build endurance without wearing it down.
 - Even though you're running at an easy pace, it's not considered an easy run since you're overloading your body from the longer duration of the run.
- Purpose: Build endurance and improve running efficiency. You're preparing your body for the entire goal race distance. The important point is that you cover the prescribed distance; how fast you cover it doesn't matter.
- Perform one long run per week. We will slowly increase the distance each week.
- You want your body to use energy 'aerobically' throughout the long run.
 - Aerobic energy production is very efficient and can continue for a long period of time as long as there is adequate oxygen. When you sprint, you are using so much energy that you can't take in oxygen fast enough. Then your body uses the anaerobic means of using energy. It is inefficient and can't be maintained for long.
 - When you train at an easy pace for a long distance, your body will become more efficient at using energy aerobically. Over time, your body will be able to run at faster speeds for longer distances without having to switch to anaerobic energy use.
- For most runners, strive to run a consistent, steady pace and finish strong!.
 - One common mistake is starting out too fast. Starting out slowly allows you to run longer because you'll have more energy later in the run.
- Negative Splits (running the 2nd half faster than the first half). For seasoned runners (with a good solid base), the long run can start easy and progress to race pace and held there. By running goal pace, you will adapt the body to what you will need on race day.
 - If you're trying this for the first time, plan on negative splitting no more than the last 25% of your run and only by a small amount, i.e. 3-5 seconds per mile.

Hill Repeats:

- Purpose: Running hills allows your body to build aerobic capacity, lactic acid tolerance (the ability to clear lactic acid from the blood), muscle strength and power. You can do this without having to increase speed.
- Hill repeats include a warm-up and anywhere from 4-8 climbs for about 1 minute each (beginning with a 4% incline increase). Run hard but controlled up the hill, and job back down as recovery.
- If you haven't established a strong base yet, consider incorporating some hills into your runs before you start tackling hill repeats.
- Pay attention to your form. You should have a slight forward lean that stems from the ankles rather than the hips, high cadence, and striking underneath the hips as you drive up the hill.

Stride-outs:

- Stride-outs are simply short fast bursts of running at a fast, but not all out pace. They are primarily designed to help improve your form and efficiency but have the added benefit of actively stretching out your running muscles by taking them through a wider range of motion than you will do in most of your running at your easy aerobic pace. These should be done near the end of your easy run days.

Fartlek Runs:

- Swedish for “speed-play”. These workouts alternate moderate-to-hard efforts with easy throughout. After a warmup, you play with speed by running at faster efforts for short periods of time (to that tree, to the next sign) followed by easy-effort running to recover.
- Purpose: To increase your speed and muscular endurance. It improves aerobic and anaerobic fitness.
- Fartlek recruits your fast twitch muscle fibers during a longer run, so ensuring that the whole muscle is getting a good workout.

Tempo (Threshold) Runs:

- A tempo run is a faster-paced workout also known as a lactate-threshold, LT, or threshold run. Tempo pace is often described as “comfortably hard.”
- Purpose: Improves a crucial physiological variable for running success: our metabolic fitness. It increases your lactate-threshold, or the point at which the body fatigues at a certain pace.
 - Your blood delivers fuel and oxygen to your running muscles and removes carbon dioxide and lactic acid (waste products). If lactic acid accumulates faster than your body can remove it, you will have to stop running. So, to run faster for a longer period of time, you need to train your body to remove lactic acid from your blood at a faster rate. This is best achieved through “threshold pace” which is the pace at which you are just about removing the lactic acid quickly enough.
- Finding the right tempo: This is the effort level just outside your comfort zone—you can hear your breathing, but you're not gasping for air. If you can talk easily, you're not in the tempo zone, and if you can't talk at all, you're above the zone. It should be at an effort somewhere in the middle, so you can talk in broken words.
- Your heart rate is typically 80 to 85 percent of your maximum heart rate.
- Perceived Exertion is an 8 on a 1 to 10 scale (a comfortable effort would be a 5).

Out and backs:

- Out and backs are a pacing workout. The goal is to run the same pace for the first and second half of each interval. If you pace evenly, you should finish at exactly six (or four or whatever the interval) minutes. If you are over six minutes you went out faster than you came back. If you are under six minutes you ran faster on the way back. Running with even pace is the most efficient way to run. This allows you to get the most out of yourself. On race day, this can significantly improve your performance. Practicing running even pace is one of the most important aspects of distance running.

Progression run:

- The goal of a progression run is to begin very slowly and gradually increase the pace throughout the run. One of the most common mistakes we make as runners is starting too fast. Starting very slowly allows us to run longer because we have more energy later in the run. A progression run also allows us to run different paces during our run. Running different paces allows our body to gain different benefits at different paces. If we run the same pace at all times, our bodies get really good at that pace but not efficient at other paces. Progression runs can also end very fast, allowing us to turn an easier run into a strong run.